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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of

Access Charge Reform


CC Docket No. 96-262

Affidavit of Patricia D. Kravtin and Lee L. Selwyn

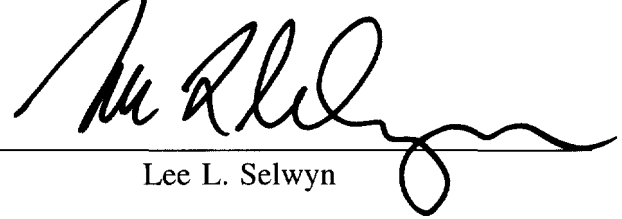
1. Our names are Patricia D. Kravtin and Lee L. Selwyn, Vice President—Senior Economist and President, respectively, of Economics and Technology, Inc, One Washington Mall, Boston, Massachusetts 02108. Economics and Technology, Inc. (ETI) is a research and consulting organization specializing in telecommunications economics, regulation and public policy. Our Statements of Qualifications appear as Attachments A and B to this affidavit. We submit this affidavit in response to the Commission's Notice of Proposed Rulemaking (NPRM) in CC Docket No. 96-262, Access Charge Reform, released December 24, 1996.

2. We prepared the attached report entitled "Assessing Incumbent LEC Claims to Special Revenue Recovery Mechanisms: Revenue Opportunities, Market Assessments, and Further Empirical Analysis of the "Gap" Between Embedded and Forward-Looking Costs" on behalf of AT&T. The facts and analyses presented therein are true and correct to the best of our knowledge, information and belief.

The foregoing statements are true and correct to the best of our knowledge, information and belief.

A handwritten signature in cursive script, reading "Patricia D. Kravtin", written over a horizontal line.

Patricia D. Kravtin

A handwritten signature in cursive script, reading "Lee L. Selwyn", written over a horizontal line.

Lee L. Selwyn

Attachment A

Statement of Qualifications

DR. LEE L. SELWYN

Dr. Lee L. Selwyn has been actively involved in the telecommunications field for more than twenty-five years, and is an internationally recognized authority on telecommunications regulation, economics and public policy. Dr. Selwyn founded the firm of Economics and Technology, Inc. in 1972, and has served as its President since that date. He received his Ph.D. degree from the Alfred P. Sloan School of Management at the Massachusetts Institute of Technology. He also holds a Master of Science degree in Industrial Management from MIT and a Bachelor of Arts degree with honors in Economics from Queens College of the City University of New York.

Dr. Selwyn has testified as an expert on rate design, service cost analysis, form of regulation, and other telecommunications policy issues in telecommunications regulatory proceedings before some forty state commissions, the Federal Communications Commission and the Canadian Radio-television and Telecommunications Commission, among others. He has appeared as a witness on behalf of commercial organizations, non-profit institutions, as well as local, state and federal government authorities responsible for telecommunications regulation and consumer advocacy.

He has served or is now serving as a consultant to numerous state utilities commissions including those in Arizona, Minnesota, Kansas, Kentucky, the District of Columbia, Connecticut, California, Delaware, Maine, Massachusetts, New Hampshire, Vermont, New Mexico, Wisconsin and Washington State, the Office of Telecommunications Policy (Executive Office of the President), the National Telecommunications and Information Administration, the Federal Communications Commission, the Canadian Radio-television and Telecommunications Commission, the United Kingdom Office of Telecommunications, and the Secretaria de Comunicaciones y Transportes of the Republic of Mexico. He has also served as an advisor on telecommunications regulatory matters to the International Communications Association and the Ad Hoc Telecommunications Users Committee, as well as to a number of major corporate telecommunications users, information services providers, paging and cellular carriers, and specialized access services carriers.

Dr. Selwyn has presented testimony as an invited witness before the U.S. House of Representatives Subcommittee on Telecommunications, Consumer Protection and Finance and before the U.S. Senate Judiciary Committee, on subjects dealing with restructuring and deregulation of portions of the telecommunications industry.

In 1970, he was awarded a Post-Doctoral Research Grant in Public Utility Economics under a program sponsored by the American Telephone and Telegraph Company, to conduct research on the economic effects of telephone rate structures upon the computer time sharing industry. This work was conducted at Harvard University's Program on Technology and Society, where he was appointed as a Research Associate. Dr. Selwyn was also a member of the faculty at the College of Business Administration at Boston University from 1968 until 1973, where he taught courses in economics, finance and management information systems.

Dr. Selwyn has published numerous papers and articles in professional and trade journals on the subject of telecommunications service regulation, cost methodology, rate design and pricing policy. These have included:

"Taxes, Corporate Financial Policy and Return to Investors"
National Tax Journal, Vol. XX, No.4, December 1967.

"Pricing Telephone Terminal Equipment Under Competition"
Public Utilities Fortnightly, December 8, 1977.

"Deregulation, Competition, and Regulatory Responsibility in the Telecommunications Industry"
Presented at the 1979 Rate Symposium on Problems of Regulated Industries - Sponsored by: The American University, Foster Associates, Inc., Missouri Public Service Commission, University of Missouri-Columbia, Kansas City, MO, February 11 - 14, 1979.

"Sifting Out the Economic Costs of Terminal Equipment Services"
Telephone Engineer and Management, October 15, 1979.

"Usage-Sensitive Pricing" (with G. F. Borton)
(a three part series)
Telephony, January 7, 28, February 11, 1980.

"Perspectives on Usage-Sensitive Pricing"
Public Utilities Fortnightly, May 7, 1981.

"Diversification, Deregulation, and Increased Uncertainty in the Public Utility Industries"
Comments Presented at the Thirteenth Annual Conference of the Institute of Public Utilities, Williamsburg, VA - December 14 - 16, 1981.

"Local Telephone Pricing: Is There a Better Way?; The Costs of LMS Exceed its Benefits: a Report on Recent U.S. Experience."
Proceedings of a conference held at Montreal, Quebec - Sponsored by Canadian Radio-Television and Telecommunications Commission and The Centre for the Study of Regulated Industries, McGill University, May 2 - 4, 1984.

"Long-Run Regulation of AT&T: A Key Element of A Competitive Telecommunications Policy"
Telematics, August 1984.

"Is Equal Access an Adequate Justification for Removing Restrictions on BOC Diversification?"

Presented at the Institute of Public Utilities Eighteenth Annual Conference, Williamsburg, VA - December 8 - 10, 1986.

"Market Power and Competition Under an Equal Access Environment"

Presented at the Sixteenth Annual Conference, "Impact of Deregulation and Market Forces on Public Utilities: The Future Role of Regulation" Institute of Public Utilities, Michigan State University, Williamsburg, VA - December 3 - 5, 1987.

"Contestable Markets: Theory vs. Fact"

Presented at the Conference on Current Issues in Telephone Regulations: Dominance and Cost Allocation in Interexchange Markets - Center for Legal and Regulatory Studies Department of Management Science and Information Systems - Graduate School of Business, University of Texas at Austin, October 5, 1987.

"The Sources and Exercise of Market Power in the Market for Interexchange Telecommunications Services"

Presented at the Nineteenth Annual Conference - "Alternatives to Traditional Regulation: Options for Reform" - Institute of Public Utilities, Michigan State University, Williamsburg, VA, December, 1987.

"Assessing Market Power and Competition in The Telecommunications Industry: Toward an Empirical Foundation for Regulatory Reform"
Federal Communications Law Journal, Vol. 40 Num. 2, April 1988.

"A Perspective on Price Caps as a Substitute for Traditional Revenue Requirements Regulation"

Presented at the Twentieth Annual Conference - "New Regulatory Concepts, Issues and Controversies" - Institute of Public Utilities, Michigan State University, Williamsburg, VA, December, 1988.

"The Sustainability of Competition in Light of New Technologies" (with D. N. Townsend and P. D. Kravtin)

Presented at the Twentieth Annual Conference - Institute of Public Utilities Michigan State University, Williamsburg, VA, December, 1988.

"Adapting Telecom Regulation to Industry Change: Promoting Development Without Compromising Ratepayer Protection" (with S. C. Lundquist)
IEEE Communications Magazine, January, 1989.

"The Role of Cost Based Pricing of Telecommunications Services in the Age of Technology and Competition"

Presented at National Regulatory Research Institute Conference, Seattle, July 20, 1990.

"A Public Good/Private Good Framework for Identifying POTS Objectives for the Public Switched Network" (with Patricia D. Kravtin and Paul S. Keller)
Columbus, Ohio: *National Regulatory Research Institute*, September 1991.

"Telecommunications Regulation and Infrastructure Development: Alternative Models for the Public/Private Partnership"

Prepared for the Economic Symposium of the International Telecommunications Union Europe Telecom '92 Conference, Budapest, Hungary, October 15, 1992.

"Efficient Infrastructure Development and the Local Telephone Company's Role in Competitive Industry Environment" *Presented at the Twenty-Fourth Annual Conference, Institute of Public Utilities, Graduate School of Business, Michigan State University, "Shifting Boundaries between Regulation and Competition in Telecommunications and Energy", Williamsburg, VA, December 1992.*

"Measurement of Telecommunications Productivity: Methods, Applications and Limitations" (with Françoise M. Clottes)

Presented at Organisation for Economic Cooperation and Development, Working Party on Telecommunication and Information Services Policies, '93 Conference "Defining Performance Indicators for Competitive Telecommunications Markets", Paris, France, February 8-9, 1993.

"Telecommunications Investment and Economic Development: Achieving efficiency and balance among competing public policy and stakeholder interests"

Presented at the 105th Annual Convention and Regulatory Symposium, National Association of Regulatory Utility Commissioners, New York, November 18, 1993.

"The Potential for Competition in the Market for Local Telephone Services" (with David N. Townsend and Paul S. Keller)

Presented at the Organization for Economic Cooperation and Development Workshop on Telecommunication Infrastructure Competition, December 6-7, 1993.

"Market Failure in Open Telecommunications Networks: Defining the new natural monopoly," *Utilities Policy*, Vol. 4, No. 1, January 1994.

"*The Enduring Local Bottleneck: Monopoly Power and the Local Exchange Carriers*," (with Susan M. Gately, et al) a report prepared by ETI and Hatfield Associates, Inc. for AT&T, MCI and CompTel, February 1994.

"Commercially Feasible Resale of Local Telecommunications Services: An Essential Step in the Transition to Effective Local Competition," (Susan M. Gately, et al) a report prepared by ETI for AT&T, July 1995.

"Efficient Public Investment in Telecommunications Infrastructure"
Land Economics, Vol 71, No.3, August 1995.

"Market Failure in Open Telecommunications Networks: Defining the new natural monopoly," in *Networks, Infrastructure, and the New Task for Regulation*, by Werner Sichel and Donald L. Alexander, eds., University of Michigan Press, 1996.

Dr. Selwyn has been an invited speaker at numerous seminars and conferences on telecommunications regulation and policy, including meetings and workshops sponsored by the National Telecommunications and Information Administration, the National Association of Regulatory Utility Commissioners, the U.S. General Services Administration, the Institute of Public Utilities at Michigan State University, the National Regulatory Research Institute at Ohio State University, the Harvard University Program on Information Resources Policy, the Columbia University Institute for Tele-Information, the International Communications Association, the Telecommunications Association, the Western Conference of Public Service Commissioners, at the New England, Mid-America, Southern and Western regional PUC/PSC conferences, as well as at numerous conferences and workshops sponsored by individual regulatory agencies.

Attachment B

Statement of Qualifications

PATRICIA D. KRAVTIN

Patricia D. Kravtin is Vice President and Senior Economist at ETI. Ms. Kravtin did graduate study in the Ph.D. program in Economics at the Massachusetts Institute of Technology, where she was a National Science Foundation Fellow. Her fields of study have included Industrial Organization, Government Regulation of Industry, and Urban and Regional Economics. While at M.I.T., Ms. Kravtin performed research for the Sloan School of Management and the Joint Center for Urban Studies of M.I.T. and Harvard. Her own empirical work has centered on multiproduct industries and has included econometric estimation of multiproduct cost functions and measurement of product-specific economies of scale and economies of joint production.

While in Washington, D.C., Ms. Kravtin gained valuable insight into the regulatory process performing research and policy analysis at the United States Department of Commerce, the Securities and Exchange Commission, and the Private Radio Bureau of the Federal Communications Commission.

Since joining ETI in 1982, Ms. Kravtin has been actively involved in telecommunications regulatory proceedings in state jurisdictions throughout the country and has frequently testified as an expert witness before regulatory commissions. Ms. Kravtin has testified before the Rhode Island Public Utilities Commission, the Maine Public Utilities Commission, the Florida Public Service Commission, the New York Public Service Commission, the Louisiana Public Service Commission, the Minnesota Public Utilities Commission, the Mississippi Public Service Commission, the Arizona Corporation Commission, the Kentucky Public Service Commission, the Delaware Public Service Commission, the Georgia Public Service Commission, the Tennessee Public Service Commission, the New Hampshire Public Utility Commission, the New Jersey Board of Regulatory Commissioners, the Arkansas Public Service Commission, the Kansas Corporation Commission, and the California Public Utilities Commission. Ms. Kravtin has also testified as an expert witness in anti-trust litigation before the United States District Court for the Eastern District of Tennessee at Greeneville.

Ms. Kravtin's assignments have involved the analysis of both rate design and revenue requirements issues. She has performed analyses of various cost methodologies used by telephone companies to determine costs and set rates, and econometric demand models used to develop estimates of repression and stimulation of demand as a result of price changes. She has conducted numerous analyses of the costs and benefits of local measured service.

Ms. Kravtin has also been involved in the analysis of issues relating to telephone company modernization expenditures and plant utilization. Ms. Kravtin has presented testimony on the subject of infrastructure/plant modernization before the Ohio General Assembly senate select Committee on telecommunications Infrastructure and Technology and the New Jersey Senate Transportation and Public Utility Committee.

More recently, Ms. Kravtin has gained extensive expertise in the area of video and multimedia information service markets. Ms. Kravtin has submitted numerous filings before the FCC

concerning the economics of video dialtone investment and/or VDT tariffs proposed by New Jersey Bell, Pacific Bell, Ameritech, Southern New England Telephone, US West, GTE, Bell Atlantic, BellSouth, NYNEX, Puerto Rico Telephone Company and Carolina Telephone in over 25 Section 214 Application proceedings. Over the past year, Ms. Kravtin has actively participated in a number of proceedings relating to the implementation of local competition pursuant to federal and state legislation, covering such topics as universal service, cost of basic service, interconnection, unbundling of network elements, and tariff development for new entrants.

Ms. Kravtin has authored and co-authored numerous papers and reports pertaining to these issues. These include the following:

"The Economic Viability of Stentor's 'Beacon Initiative,' Exploring the extent of its financial dependency upon revenues from services in the Utility Segment," prepared for Unitel, submitted as evidence before the Canadian Radio-television and Telecommunications Commission, March 1995.

"A Public Good/Private Good Framework for Identifying Pots Objectives for the Public Switched Network" prepared for the National Regulatory Research Institute, October 1991;

"The U S Telecommunications Infrastructure and Economic Development," presented at the 18th Annual Telecommunications Policy Research Conference, Airlie, Virginia, October 1990;

"An Analysis of Outside Plant Provisioning and Utilization Practices of US West Communications in the State of Washington," prepared for the Washington Utilities and Transportation Commission, March 1990; and

"Telecommunications Modernization: Who Pays?," prepared for the National Regulatory Research Institute, September 1988.

Ms. Kravtin has also been actively involved in the analysis of issues relating specifically to industry structure, BOC market power and MFJ restrictions, regulatory reform, price caps regulation, access charges, and local and long-distance competition in the telecommunications industry at both the state and federal level. Ms. Kravtin has served as an expert witness in antitrust cases involving BOC monopolization. She has co-authored numerous papers and reports pertaining to these issues. These include the following:

"Analysis of Incumbent LEC Embedded Investment: An Empirical Perspective on the 'Gap' between Historical Costs and Forward-looking TSLRIC," Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, submitted in FCC CC Docket 96-98, May 30, 1996.

"Reply to X-Factor Proposals for the FCC Long-Term LEC Price Cap Plan," prepared for the Ad Hoc Telecommunications User Committee, submitted in FCC CC Docket 94-1, March 1, 1996.

"Establishing the X-Factor for the FCC Long-Term LEC Price Cap Plan," prepared for the Ad Hoc Telecommunications User Committee, submitted in FCC CC Docket 94-1, December, 1995.

"Fostering a Competitive Local Exchange Market in New Jersey: Blueprint for Development of a Fair Playing Field," prepared for the New Jersey Cable Television Association, January 1995.

"The Enduring Local Bottleneck: Monopoly Power and the Local Exchange Carriers," February 1994.

"A Note on Facilitating Local Exchange Competition," prepared for E.P.G., November 1991;

"Testing for Effective Competition in the Local Exchange," prepared for the E.P.G., October 1991;

"Report on the Status of Telecommunications Regulation, Legislation, and modernization in the states of Arkansas, Kansas, Missouri, Nebraska, Oklahoma and Texas," prepared for the Mid-America Cable-TV Association, December 13, 1990;

"Sustainability of Competition in Light of New Technologies," presented at the Twentieth Annual Williamsburg Conference of the Institute of Public Utilities, Williamsburg, Virginia, December 1988;

"Industry Structure and Competition in Telecommunications Markets: An Empirical Analysis," presented at the Seventh International Conference of the International Telecommunications Society at MIT, July 1988;

"Market Structure and Competition in the Michigan Telecommunications Industry," prepared for the Michigan Divestiture Research Fund Board, April 1988;

"Impact of Interstate Switched Access Charges on Information Service Providers - Analysis of Initial Comments," submitted in FCC CC Docket No. 87-215, October 26, 1987;

"An Economic Analysis of the Impact of Interstate Switched Access Charge Treatment on Information Service Providers," submitted in FCC CC Docket No. 87-215, September 24, 1987;

"Regulation and Technological Change: Assessment of the Nature and Extent of Competition From A Natural Industry Structure Perspective and Implications for Regulatory Policy Options," prepared for the State of New York in collaboration with the City of New York, February 1987;

"Long-Run Regulation of AT&T: A Key Element of a Competitive Telecommunications Policy," *Telematics*, August 1984;

"BOC Market Power and MFJ Restrictions: A Critical Analysis of the 'Competitive Market' Assumption," submitted to the Department of Justice, July 1986; and

"Economic and Policy Considerations Supporting Continued Regulation of AT&T," submitted in FCC CC Docket No. 83-1147, June 1984.

Ms. Kravtin attended George Washington University on an Honor Scholarship where she received a B.A. with Distinction in Economics. She was elected to Phi Beta Kappa and Omicron Delta Epsilon in recognition of high scholastic achievement in the field of Economics. Ms. Kravtin is a member of the American Economic Association.

ASSESSING INCUMBENT LEC CLAIMS TO SPECIAL REVENUE RECOVERY MECHANISMS:

Revenue opportunities, market assessments,
and further empirical analysis of the "Gap"
between embedded and forward-looking costs

In the Matter of
Access Charge Reform

CC Docket No. 96-262

Patricia D. Kravtin
Lee L. Selwyn

January 29, 1997



ECONOMICS AND TECHNOLOGY, INC.

ONE WASHINGTON MALL • BOSTON, MASSACHUSETTS 02108

Preface

ASSESSING INCUMBENT LEC CLAIMS TO SPECIAL REVENUE RECOVERY MECHANISMS

In the FCC's *Notice of Proposed Rulemaking* (NPRM) adopted December 23, 1996 in the Access Charge Reform proceeding, CC Docket No. 96-262, the Commission sought comment, *inter alia*, on issues relating to the potential difference between the revenues that incumbent LECs generate from current interstate access charges (based on embedded costs allocated to the interstate jurisdiction) and the revenues that revised access charges (based on forward-looking costs) are likely to generate.¹

Similar issues regarding the differential between historical embedded costs incurred by ILECs and the forward-looking long-run total service long-run incremental costs (TSLRIC) of ILEC services and facilities were raised by the Commission in CC Docket 96-98 in the context of rates that ILECs would set for interconnection, collocation, and unbundled network elements pursuant to Section 251 of the Act.² AT&T commissioned Economics and Technology, Inc. (ETI) to undertake a major empirical study of ILEC embedded investment for the purposes of examining the actual extent of any "gap" between the ILECs' historical embedded revenue requirement and forward-looking TSLRIC. The Study, entitled *Analysis of Incumbent LEC Embedded Investment: An Empirical Perspective on the "Gap" Between Historic Costs and Forward-looking TSLRIC*, was submitted as part of AT&T's Reply Comments, filed May 30, 1996.

This report incorporates the results of ETI's previous analysis of ILEC embedded costs within the broader framework of total revenue recovery as appropriate for consideration of the issues raised by the Commission in the extant proceeding. We start with our analysis of the *cost* "gap" between embedded and forward-looking costs which remains extremely pertinent. However, we add to that cost analysis consideration of the *totality* of ILEC *revenue* opportunities that contribute (now and in the future), as have interstate access

1. NPRM, CC 96-262 at paras. 241-270.

2. NPRM, CC Docket 96-98 at para. 144.

Assessing ILEC Claims to Special Revenue Recovery Mechanisms

charges in the past, to the ILEC's revenue recovery of embedded investment related to network services.

This project was conducted under the overall direction of Patricia D. Kravtin, Vice President—Senior Economist, with the assistance of Dr. Lee L. Selwyn, President of ETI. Research and analytical support for this project was provided by Sonia N. Jorge, Paul S. Keller, Michael J. DeWinter, and Joseph W. Laszlo, of ETI.

Economics and Technology, Inc.
Boston, Massachusetts

January 29, 1997

Executive Summary

ASSESSING INCUMBENT LEC CLAIMS TO SPECIAL REVENUE RECOVERY MECHANISMS

This Study responds to the empirical issues raised in the NPRM relating to the difference between historical embedded costs and forward-looking costs, and associated revenue recovery issues. The Study's framework of analysis is a comprehensive one, similar to that taken by investors in their evaluation of the ILECs' market value, that takes into account the *totality* of ILEC earnings opportunities relevant to recovery of the ILECs' embedded investment.

The assignment of ILEC costs to interstate access charges is fundamentally a matter of *revenue recovery* of ILEC investment in local network facilities rather than cost recovery. The assignment of revenue recovery responsibility to interstate access is based upon the application of *accounting* rules rather than the attribution of economic costs. In this proper context, interstate access is but *one isolated source* of revenue recovery out of the many relevant revenue recovery opportunities available to the ILECs.

In this Study, we have included various sources of ILEC revenues (i.e., regulated and nonregulated, interstate and intrastate, current and future opportunities) related to the ILEC's local network facilities. ETI performs several economic and empirical analyses relating to total (unseparated) ILEC costs, revenues, and earnings.

Several basic premises individually and collectively shape the various analyses set forth in this Study. As described in Section 2:

- During the period from at least 1990 to present, the ILECs have been successful in their efforts to get out from under rate of return regulation with its emphasis on historical embedded costs and to enjoy the increased freedom under price cap regulation to make market-driven decisions. Price cap regulation, as successfully advocated by the ILECs, was expressly intended to sever the link between prices and costs, and to place the ILECs "at risk" with respect to capital investments made from that point forward. ILECs are not entitled to special revenue recovery of net book

Assessing ILEC Claims to Special Revenue Recovery Mechanisms

investment associated with plant placed after the onset of price caps and that was motivated by the sale of competitive services offerings (e.g., additional lines, custom calling and other vertical services) and that utilize spare plant supposedly contributing to a “stranded investment” problem.

- To the extent ILECs have experienced overearnings, i.e., the earning of rates of return in excess of a “fair” (i.e., competitive) return on their net book investment, since adoption of price cap regulation, this has provided ILECs with additional recovery of the costs of their local network facilities; while such recovery has gone unrecorded, it nonetheless has occurred and is properly taken into account in assessing ILEC claims to special revenue recovery mechanisms at this time.
- The passage of the Telecommunications Act of 1996 should not be viewed as a bright line depicting the start of a “new competitive paradigm,” but rather as the culmination of multi-year efforts by the ILECs to gain authority to enter new markets. New and expanded revenue opportunities made available to the ILECs with the passage of the Telecommunications Act (e.g., long distance) will directly mitigate any revenue losses that may arise as a result of reductions in access charges.
- ILECs enjoy and will continue to enjoy (independent of any future access charge reductions) substantial revenue streams from a number of services (e.g., “vertical services”) that contribute to ILEC earnings and provide the ILEC with additional sources of significant (current and future) revenue-generating potential that is appropriately taken into consideration in assessing ILEC claims for special revenue recovery mechanisms. While the extent of potential market share erosion for core ILEC local exchange and exchange access services has been grossly exaggerated by the ILECs, the mere loss of market share does not necessarily translate into a loss of revenues or market value of the firm, given market growth and new revenue opportunities available to the ILECs.
- For certain plant categories such as metallic cable, there is actually an increase in the economic value of plant already in service, since replacement costs have been rising relative to historic acquisition costs carried on the ILECs’ books, and new technologies are developing that utilize this existing plant to provide enhanced digital and video services.

The study approach we follow focuses on both the cost and revenue/earnings side of the equation, respectively, encompassing: (1) an analysis of ILEC embedded investment; and (2) an analysis of ILEC revenue opportunities and market assessment.

Analysis of ILEC Embedded Investment

In this new study, we revisit and update a major empirical study of ILEC embedded investment conducted by ETI, *Analysis of Incumbent LEC Embedded Investment: An Empirical Perspective on the "Gap" Between Historic Costs and Forward-looking TSLRIC* (Original "Gap" Study),³ to provide projections of year end 1996 results and further break-downs of excess investment into outside plant and digital switching categories. As discussed in Section 3, the updates we perform confirm, and indeed strengthen, the empirical results found in the original study.

Using three distinct, but interrelated analyses, the "Gap" Studies examine empirical evidence concerning the "gap" between historical embedded "revenue requirement" costs and bottoms-up aggregate TSLRIC results:

- (1) The *vintage* analysis determines the relative age of ILEC historic net book investment in order to test the validity of ILEC claims that large amounts of obsolete plant acquired at a high cost relative to today's prices remain in the ILECs' embedded rate base;
- (2) The *composition* analysis uses plant-specific data to answer the question of how the composition of plant accounts — in terms of the proportion of surviving plant associated with older vs. newer vintages — varies with the type of plant, and to examine the implications of any observed variation in terms of its impact upon the "gap" between historic embedded costs and TSLRIC results; and
- (3) The *utilization* analysis further examines post-1990 investment for the purpose of determining the portion of that aggregate investment that can be attributed to supporting growth in demand for basic service as distinct from ILEC strategic competitive ventures.

Taken together, the three component analyses of the Gap Studies demonstrate that, as a general proposition, the existence of a "gap" between historical embedded costs and TSLRIC results cannot be ascribed to the obsolescence or (relative to current prices) high cost of plant put in place to satisfy basic service demand as part of any explicit or implicit pre-competition regulatory bargain imposed upon the ILECs.

- We find that as of the end of 1996, roughly 65% of ILEC historic book investment was acquired on or after January 1, 1990, i.e., after ILECs were well

3. The original "Gap" study was submitted to the FCC as part of AT&T's Reply Comments (May 30, 1996) in CC Docket 96-98.

Assessing ILEC Claims to Special Revenue Recovery Mechanisms

aware of impending changes in the market and regulatory environments and entirely capable of managing their construction and investment programs to accommodate such changes.

This study concludes that a primary driver of ILEC plant additions and retirements over the past few years was related to and motivated by pursuit of strategic business goals, i.e., positioning for other than basic exchange or exchange access lines of business (e.g., additional lines, custom calling) or for entry into new lines of business (e.g., other advanced digital and video services).

- We find that as of the end of 1996, it is estimated that in the order of magnitude of \$30-billion of historic net book investment, corresponding to roughly \$9-billion in estimated annual costs, cannot be explained by basic service demand growth over the 1990 to 1996 period. Approximately \$5-billion of the \$9-billion is associated with outside plant categories, with the remaining \$4-billion associated with digital switching.

We also find new evidence in support of the original “Gap” Study’s conclusion that embedded costs associated with certain types of plant (e.g., metallic cable) may actually represent “hidden” and valuable assets to the extent that current reproduction costs of such plant exceed the historic costs carried on the ILECs’ books. Particularly significant are recent 1996 technological developments concerning ADSL, a technology that utilizes ILECs’ existing copper cable versus coaxial cable as a preferred broadband distribution medium.

- As found in the original “Gap” Study, a much greater proportion, i.e., 70% to 80%, of pre-1990 plant is surviving for plant categories for which current reproduction costs may be higher than historical embedded costs (i.e., metallic cable), as compared with 20% to 30% for plant categories for which current reproduction costs are lower.

The original “Gap” Study also presented anecdotal evidence corroborating the conclusions of the empirical analyses. This anecdotal evidence is strongly corroborated by the empirical estimates of revenues from services other than local basic exchange and exchange access that we provide in Section 4 of this Study.

Analysis of ILEC Revenue Opportunities and Market Assessment

This study component examines indicators of ILEC market value and sources of revenue pertinent to assessment of ILEC claims for special revenue recovery mechanisms. Investors look to the totality of the financial results of the firm in evaluating the firm’s

value, including current earnings, appreciation in the value of assets, opportunities for growth in earnings in the future, and an increase in the market value of the firm overall. The various sources of revenues identified in this study are recognized by investors and reflected in their evaluation of ILEC stocks. To the extent persistent investor willingness to pay substantial premiums over the book value of ILEC stock is observed demonstrates that ILEC earnings and investment recovery opportunities, in the aggregate, have increased (and can be expected to increase) in the face of “competition.”

ETI's analysis of ILEC revenue opportunities and market assessment strongly suggests that on balance the opportunities for revenue expansion and market growth available to ILEC under the current regulatory/competitive environment are more than sufficient to offset any revenue losses that may arise from potential competition or due to the alignment of rates to economic forward-looking costs as proposed for access charges.

The results of ETI's analysis of ILEC revenue opportunities and market assessment reveal:

Market-to-Book Values/Premiums Over Book Values

- Over the decade following divestiture, the market-to-book value ratio for ILECs grew steadily from around 1 to up in the range of two to three times book value; by contrast market-to-book ratios for major gas and electric companies have remained in the 1 to 1.5 range.
- Even after upward adjustments are made to ILEC financial book values to account for the write-offs taken by ILECs pursuant to SFAS 71 (and not reflected on regulatory books), ILEC market-to-book ratios are shown to have increased steadily to relatively high levels.
- Under the terms of recent merger agreements, SBC is proposing to pay a premium over book value of as much as \$10.1-billion for the assets of Pacific Bell; Bell Atlantic similarly is proposing to pay a premium over book value of as much as \$13.5-billion for the assets of NYNEX.

Sources of Revenue Recovery

This Study examines several sources of existing and future revenue streams available to the ILECs that suggest very favorable prospects for ILEC earnings and that are appropriately applied to the recovery of ILEC local network facilities costs. These include, but are not limited to, long distance, vertical services, additional lines, advanced digital/broadband services, and yellow pages. Collectively, the sources of revenues examined in this Study conservatively total in the range of \$19-billion to \$31-billion.

Summary of Sources of Revenues Analyzed in Study

(Annual \$-Bil)

Second Lines	\$2.0-3.0
Vertical Services	\$4.0-7.0
InterLATA Long Distance	\$11.0-18.0
Advanced Digital/Broadband	\$0.4-0.5
Yellow Pages Directory Ad.	\$2.0-2.5
Total	\$19.4-31.0

Source: Appendix C.

Earnings/Return on Equity

The persistence of high premiums relative to book value implies the presence of one or, more likely, both of the following two key conditions: (1) ILECs continue to possess substantial market power, and investors expect that in the future ILECs will be able, with respect to the totality of their service offerings, to keep prices high relative to cost and thereby earn supranormal profits; and (2) ILECs will have unique opportunities to exploit assets (i.e., excess capacity, name/brand recognition) acquired while under rate of return regulation. This conclusion is supported by observed high returns on equity earned by ILECs following adoption of price cap regulation.

- Over the period 1990 to the present, ILECs have had consistent overearnings (conservatively estimated in the range of \$7.7-billion) relative to a “fair” (i.e., competitive) return on their net book investment, with rates of return on equity, ranging as high as 25.7% in 1996.

In summary, these analyses conclusively demonstrate: (1) the substantial nature of current and future revenue opportunities available to the ILECs from services linked to the ILECs’ local network facilities; (2) that investors, as should the Commission, highly value the ILECs’ current and future revenue opportunities; and (3) that such revenue opportunities must be taken into account as mitigating factors in assessing the ILECs’ claimed entitlement to a “special” recovery mechanism. In conjunction with the results of

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the “Gap” Studies, these analyses further compel the conclusion there is no “stranded investment” problem at all.

This Study demonstrates with extensive empirical analysis that the existence of a “gap” between historical embedded costs and TSLRIC results cannot be ascribed to the obsolescence or (relative to current prices) high cost of plant put in place to satisfy basic service demand as part of any explicit or implicit pre-competition regulatory bargain imposed upon the ILECs. This Study also provides substantial evidence that looking only at the cost side of the equation or as it pertains to a proposed reduction in revenues of an isolated regulated service (i.e., interstate access) as advocated by the ILECs, will provide an extremely distorted and overstated view of potential ILEC *revenue recovery* claims.

As the last piece of the Commission’s trilogy for implementing local competition pursuant to the Act, the decisions reached by the Commission in this proceeding will have far-reaching effects on whether the full potential of competition is to be realized. Acquiescence to ILEC claims for special revenue recovery, despite overwhelming evidence that such a mechanism is not required, would be extremely myopic and at odds with the new competitive and economic cost paradigm mandated by the Act.

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